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APPLICATION NO	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO
09 227,242	01 08 1999	EDWARD S. MISZCZAK	8313	8511

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EXAMINER

ELVE, MARIA ALEXANDRA

ART UNIT	PAPER NUMBER
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1725

18

DATE MAILED: 04 08 2002

Please find below and/or attached an Office communication concerning this application or proceeding.

11F-12

Advisory Action

Application No.
09/227,242

Applicant(s)
Miszczak et al.

Examiner
M. Alexandra Elve

Art Unit
1725



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED _____ FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid the abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

THE PERIOD FOR REPLY [check only a) or b)]

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
- b) ☐ In view of the early submission of the proposed reply (within two months as set forth in MPEP § 706.07 (f)), the period for reply expires on the mailing date of this Advisory Action, OR continues to run from the mailing date of the final rejection, whichever is later. In no event, however, will the statutory period for the reply expire later than SIX MONTHS from the mailing date of the final rejection.

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☒ A Notice of Appeal was filed on 3/21/02. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will be entered upon the timely submission of a Notice of Appeal and Appeal Brief with requisite fees.
3. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search. (See NOTE below);
- (b) ☐ they raise the issue of new matter. (See NOTE below);
- (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) ☐ they present additional claims without cancelling a corresponding number of finally rejected claims.

NOTE: _____

4. ☐ Applicant's reply has overcome the following rejection(s):

5. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment cancelling the non-allowable claim(s).
6. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because:
see advisory action
7. ☒ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
8. ☒ For purposes of Appeal, the status of the claim(s) is as follows (see attached written explanation, if any):
- Claim(s) allowed: _____
- Claim(s) objected to: _____
- Claim(s) rejected: 1 & 3 - 27
9. ☐ The proposed drawing correction filed on _____ a) ☐ has b) ☐ has not been approved by the Examiner.
10. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
11. ☐ Other: _____

Art Unit: 1725

ADVISORY ACTION

Affidavit under 37 CFR 1.132

1. The affidavit under 37 CFR 1.132 filed 9/6/2001 is insufficient to overcome the rejection of claims 1 & 3-27 based upon Nagarajan et al. in view of James et al. and Crockett et al. as set forth in the last Office action because:

It refer(s) only to the system described in the above referenced application and not to the individual claims of the application. Thus, there is no showing that the objective evidence of nonobviousness is commensurate in scope with the claims. See MPEP § 716.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 & 3-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagarajan et al. (US Pat. 5,824,992) in view of James et al. (US Pat. 5,192,851) and Crockett et al. (US Pat. 5,365,036).

Art Unit: 1725

Nagarajan et al. discloses a metal core wire with a steel sheath. The core composition is between 0.001-12 wt% of the total metal core wire. Additionally, the core contains iron powder (abstract). The oxygen content of the metal-core wire weld deposits are affected by the shielding gas. The total metal core wire compositions contain the following approximate ranges, C (0.005-0.15 wt%), Mn (1.0-4.0 wt%) and Si (0.3-2.5 wt%) by total weight of the wire. The steel sheath contains the following approximate ranges, Mn (0.1-1.1 wt%), C(0.005-0.15 wt%), Ti, B, and the balance Fe. The metal core contains approximately C(0.005-0.030 wt%), Mn (0.5-2.5 wt%), Si (0.2-1.2 wt%), Ti (0.001-0.100 wt%), Fe (0.1-10.0 wt%) which yields the following combined compositions: Fe-Mn (0.6-12.5 wt%), Fe-Si (0.3-13.2 wt%), and Fe-Ti (0.101-10.1 wt%). Analysis of the final weld deposit yields the presence of nitrogen (col. 2, lines 4-6; col. 4, lines 1-65; col. 5, lines 1-65; col. 6, lines 1-65; col.7, lines 1-65 & col. 8, lines 1-45). Furthermore, it is well known in the art that steels contain trace amounts of nitrogen, phosphorous and sulfur, that is, P (≤ 0.04 wt%), S (≤ 0.03 wt%) and N (≤ 0.2 wt%) (ASM Handbooks). Nagarajan et al. does not teach the presence of aluminum and silicon in the steel sheath, the composition of the shielding gas, the exact core weight percent of the total wire or fume reduction.

James et al. discloses an electrode wire for electric arc welding. The core contains Mn, Si and the remainder of the core contains fused mixed oxide, desired alloying components and iron powder (abstract). The oxides contain Al_2O_3 . The proportion of the core is 15 to 28 wt% of the total wire. Shielding gas is an argon-carbon dioxide mixture containing 2 to 25 % CO_2 . (Col. 1, lines 65-66; col. 2, lines 13-17) It would have been obvious to one of ordinary skill in the art at

Art Unit: 1725

the time of the invention to use the Si and Al and core composition as disclosed by James et al. in the Nagarajan et al. welding electrode because of strength enhancement due to the presence of aluminum and silicon.

Crockett et al. discloses a gas shielded electrode. The wire has a ferrous sheath and the core contains aluminum, titanium, carbon, manganese and silicon. The presence of aluminum reduces the fume amounts during welding. Solid wire welding had reduced fume generation with the presence of aluminum (abstract & col. 3, lines 25-50). It would have been obvious to one of ordinary skill in the art at the time of the invention to measure fume generation as taught by Crockett et al. for the Nagarajan et al. wire because it would characterize the welding wire and deposit more completely.

If the range of the prior art and claimed range do not overlap, obviousness still exists if the ranges are close enough that one would not expect a difference in properties. In re Woodruff 16 USPQ 2d 1934; Titanium Metals Corp. v. Banner 227 USP 773 (Fed. Cir. 1985); In re Aller 105 USPQ 233. Furthermore, the selection of reaction parameters, such as gaseous environments, would have been obvious. It is well settled that where patentability is predicated upon a change in a condition of prior art process, such as gaseous environments (argon and carbon dioxide concentrations), the change must be at least "critical", that is, it must lead to a new and unexpected result. The applicant has the burden of providing such proof of criticality. In re Aller 105 USPQ 233, 255 (CCPA 1955).

Art Unit: 1725

Response to Response under 37 CFR 1.116

4. Upon carefully reviewing Applicant's arguments filed March 15, 2002 the Examiner acknowledges the changes to the affidavit.

5. Applicant's arguments filed March 15, 2002 (paper # 16) have been fully considered but they are not persuasive.

Applicant argues that prior art does not address the reduction of fumes as stated in claims 1 & 21. The examiner respectfully disagrees because although Nagarajan et al. and of James et al. does not teach fume reduction the compositions are physically the same. If a composition is physically the same, it must have the same properties. A chemical composition and its properties are inseparable. Therefore the prior art teaches the same chemical composition, the properties of instant claims are necessarily present. See In re Spada, 15 USPQ 2d 1655, 1658. Additionally, Crockett et al. does teach fume reduction.

Applicant argues that Nagarajan discloses a sheath with a carbon content as low as 0.005% merely as background and not as a specific embodiment, and hence the reference is not valid. The examiner respectfully disagrees because the teachings of a reference must be taken in its entirety and not limited to only specific embodiments.

Additionally, the applicant argues that James does not disclose fume reduction. The examiner agrees that James does not teach fume reduction. The examiner used Crockett to teach

Art Unit: 1725

fume reduction, not James. Furthermore, the 35 USC 103 claim rejections are were based on a combination of art, that is, instant claims were unpatentable over Nagarajan et al. in view of James et al. and Crockett et al. Furthermore, unobviousness cannot be established by attacking the references individually when the rejection is based on a combination of references. In re Novak 16 USPQ 2d 2041, 2043 (Fed. Cir., BPAI 1989); In re Merck & Co. 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986); In re Keller 208 USPQ 871 (CCPA 1981); *Ex parte Varga* 189 USPQ 204; *Ex parte Campbell* 172 USPQ 91; In re Scheckler 168 USPQ 716 (CCPA 1971); In re Young 159 USPQ 725; In re Lyons 150 USPQ 741.

Applicant argues that the reliance on Crockett to teach fume generation indicates that Nagarajan alone does not support the rejection. The examiner respectfully notes that the rejection is a 35 USC 103 rejection which is based on a combination of art, that is, instant claims were unpatentable over Nagarajan et al. in view of James et al. and Crockett et al. Furthermore, unobviousness cannot be established by attacking the references individually when the rejection is based on a combination of references. In re Novak 16 USPQ 2d 2041, 2043 (Fed. Cir., BPAI 1989); In re Merck & Co. 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986); In re Keller 208 USPQ 871 (CCPA 1981); *Ex parte Varga* 189 USPQ 204; *Ex parte Campbell* 172 USPQ 91; In re Scheckler 168 USPQ 716 (CCPA 1971); In re Young 159 USPQ 725; In re Lyons 150 USPQ 741.

Art Unit: 1725

Conclusion

6. **THIS ACTION REMAINS FINAL.**

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Bushey et al. (US Pat. 5,095,191); Keegan et al. (US Pat. 5,857,141).

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Alexandra Elve whose telephone number is (703) 308-0092. The examiner can normally be reached Monday to Friday from 6:30 AM to 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn, can be reached on (703) 308-3318. The fax number for the group is (703) 872-9386.

Any inquiry of general nature to the status of this application or proceeding should be directed to the group receptionist whose telephone number is (703) 308-0661.

April 5, 2002.

ALEXANDRA ELVE
PRIMARY EXAMINER